

# Research & Policy Brief Series

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## Living with Wildlife on the Rural-Urban Interface\*

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### What is the Issue?

New York State (NYS) is home to hundreds of species of wildlife. Interactions with wildlife such as white-tailed deer, black bear, Canada geese, and coyotes are common for residents of rural, exurban, and urban-rural interface communities. Most of these interactions are positive, but some may have negative economic, aesthetic, health, and safety impacts. Although regional NYS Department of Environmental Conservation (DEC) offices partner with communities by providing technical advice, issuing necessary permits, and providing referrals to other agencies or the private sector, it's not their focus, nor do they have the resources, to deal with wildlife management solutions at an individual community level. Community residents and local institutions need to assume responsibility and play multiple roles in identifying and implementing effective approaches to achieve peaceful human-wildlife coexistence in partnership with state and federal agencies.

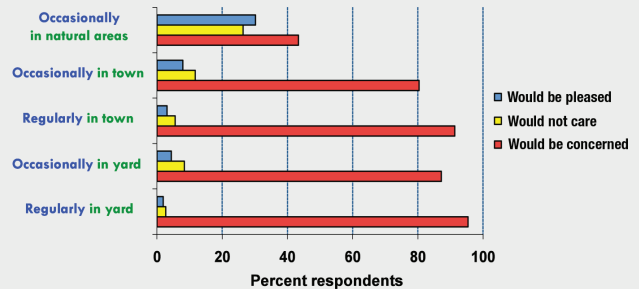


### Example: The Case of Coyotes

Residents of many NYS communities may have the opportunity to see coyotes near their homes. Their reactions may range from enjoyment to concerns about coyote encounters with pets or people. Understanding how people feel about the presence of coyotes and what they perceive as a "problem" interaction can inform a community about how best to respond to coyotes in their midst.

A recent study in Westchester and Saratoga Counties found that there was a general awareness of coyotes in the communities, with many residents having observed them first hand. Overall, coyote presence in natural areas was acceptable, but when coyotes were sighted in "human habitats," such as in town or in private yards, they became a concern (Figure 1). To provide information about living with coyotes in Westchester County, local and state groups and agencies collaborated to develop a coordinated communication strategy. While the partners had different orientations and responsibilities, they identified common objectives that focused on promoting tolerance and avoiding problematic interactions with coyotes. Communication and education campaigns of this kind may foster appreciation of coyotes, to encourage risk-reducing behaviors, and facilitate sustainable coexistence between coyotes and humans over time.

**Figure 1:** Residents' reactions to potential coyote presence in their area, based on proximity and frequency



Source: Living with Coyotes in Suburban Areas: Insights from Two New York State Counties. 2008. H. Wieczorek Hudenko, W.F. Siemer, and D.J. Decker. HDRU Publ. 08-8. Dept of Nat. Resour., Coll. Ag. and Life Sci., Cornell Univ., Ithaca, NY. 67pp.

### Lessons Learned<sup>1</sup>

A community's ability to live with wildlife can be improved by learning from the experiences of others who have addressed this issue. Based on case studies from across NYS, we outline characteristics of human-wildlife interactions and related community responses.

- *People turn to local resources when confronted with wildlife issues, either for information or for services that can provide assistance.*
  - If wildlife are perceived to present a safety threat, local police, animal control officers, or public safety departments are contacted.
  - If a nuisance problem is encountered by homeowners, they seek information from Cooperative Extension and assistance from local Nuisance Wildlife Control Operators (NWCOS).
  - If a group of residents find they share a common problem, they contact local government officials and seek a community-level response.
- *A variety of perspectives can be expected in community wildlife issues.* Institutions and entities important to engage include:
  - Local government
  - NYSDEC, regional wildlife office (<http://www.dec.ny.gov/about/50230.html>)
  - Law enforcement (e.g., police, department, public safety departments, animal control officers)
  - News and other media representatives (e.g., local public access TV stations, websites)
  - Cornell Cooperative Extension (<http://www.cce.cornell.edu/>)

<sup>1</sup>Research upon which this *Brief* is based was funded primarily by NYSDEC (Federal Aid in Wildlife Restoration Project WE-173-G) and the Cornell University Agricultural Experiment Station.

- USDA Animal and Plant Health Inspection Service—Wildlife Services (<http://www.aphis.usda.gov/ws/statereports/newyork.html>)
- Environmental planner, county planning department
- Managers of nature centers, parks and protected areas (e.g., municipal, county, state, and private land trusts and conservancies)
- NWCOs (>1000 statewide; check local yellow pages for “wildlife control” or “pest management” )
- Local hunting and conservation clubs
- Nongovernmental organizations (e.g., animal welfare and animal rights organizations, land trusts)
- Grass roots organizations established due to perceived community issue
- **Attitudes about wildlife in a community can change over time.** For example, the number of residents who say they are concerned about deer in their neighborhood may increase significantly as they experience or hear about ornamental plant damage and vehicle collisions. Conversely, a study found that landowners with more experience with black bears had higher tolerance for their presence than landowners with little experience.
- **Primary impacts associated with wildlife in a community can change over time—dated studies about community preferences can be misleading.** For instance, concerns about deer in communities historically have tended to focus on impacts associated with vehicle collisions and plant damage, but over the last decade wildlife-associated disease risk, such as human cases of Lyme disease, has been a growing concern.
- **Stakeholders who have experienced wildlife-related benefits often express higher tolerance for negative human-wildlife interactions.** Studies on a range of human-wildlife issues have demonstrated that people who hunt, fish, feed and watch wildlife are more willing to accept negative impacts such as minor property damage.
- **Personal experience with wildlife influences wildlife-related risk perception.** Studies suggest that non-confrontational encounters with a species such as black bear tend to lower concern and risk perception. Conversely, a more consequential encounter, such as with a coyote that threatens, injures, or kills a pet, may elevate concern about a risk previously not recognized.
- **Input from both informants and community residents is preferable.** Input from a few community members who are most deeply involved in wildlife issues (i.e., informants) may not be representative of the community overall. Informant input should be augmented with a systematic survey and community engagement to gain understanding about public awareness, beliefs, attitudes, and risk perceptions useful for management decision-making and communication efforts.
- **Stakeholders want to give input, but one size does not fit all.** Some residents may be happy to participate in only a survey while others may want to write to the village board or attend a public meeting to express their views. Some may be willing to commit to participating in a citizen task force so that they may study the issue and influence management decisions.
- **Public desire to resolve a wildlife concern does not mean consensus about solutions will emerge easily.** Most community wildlife controversies focus on proposed methods for dealing with problems. Community members frequently disagree over the methods to address wildlife issues. For instance, selectively removing individual animals that have become food conditioned or habituated to humans to the extent that they pose a threat may solve a local problem. Nevertheless, lethal removal of wildlife often faces resistance. Even in a situation where community members agree that some action is needed, disagreement among the interested parties may delay solutions (e.g., legal challenges, town ordinances, letter writing campaigns).
- **Communities need to consider long-term planning horizons for program implementation.** Wildlife such as deer, Canada geese, and beaver may

maintain home ranges in urban areas for many years and resist changing their behaviors, considerable time may be required before the effects of management are seen. Similarly, people's behaviors that contribute to conflicts often take time (perhaps a generation) to shift. Thus, strategies that commit adequate effort and funding over the long-term are required to gain solutions.

- **Local news media are important in framing a community wildlife issue, and can be helpful in informing community members about the issue.** Local print, TV, web, and radio outlets help inform residents' about human-wildlife interactions in the community, as well as management decisions and strategies.
- **An information and education effort alone may do little to reduce community residents' behaviors that cause problems with wildlife.** Education interventions generally are helpful, but used alone typically yield only modest and temporary behavior change across a community. Usually a combination of activities directed at the target animals, laws, enforcement, landscape modification, and public information and education is required.

## Community Involvement, Support & Partnerships

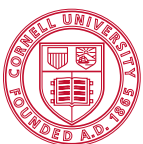
Community involvement is critical to decision making about wildlife issues. A variety of opportunities for community input and engagement should be developed to connect citizens with wildlife agencies, local information sources, local sources of assistance, and various interest groups. Engaging community actors early in the development of wildlife management education and policy will lead to more widely acceptable strategies over the long term. Clear *objectives* are necessary before discussing actions. Consensus on the need for management is not always accompanied by agreement on acceptable methods. If possible, partnerships and agreements about protocols for dealing with human-wildlife conflicts should be developed before conflict occurs. NYSDEC, USDA-APHIS Wildlife Services and local NWCOs should be engaged as partners in protocol development as they have invaluable experiences to share and roles to play. Having policy tools in place (e.g., ordinances, agreements with cooperators, accepted protocols) will position a community to deal effectively with issues that inevitably arise as humans and wildlife attempt to coexist.

Community-based wildlife management is a complex undertaking. Community deliberation and effective partnerships are key elements of success. Proactively planning for management is the best way to improve a community's ability to live with wildlife on the urban-rural interface.

## Resources:

- Cornell Cooperative Extension website: <http://wildlifecontrol.info/Pages/default1.aspx>
- Decker, D. J., T. B. Lauber, and W. F. Siemer. 2002. Human - Wildlife Conflict Management: A practitioner's guide. Northeast Wildlife Damage Management Research and Outreach Cooperative. Ithaca, New York.
- Decker, D. J., D. B. Raik, and W. F. Siemer. 2004. Community-based suburban deer management: A practitioner's guide. Northeast Wildlife Damage Management Research and Outreach Cooperative. Ithaca, New York.
- Siemer, W. F., D. J. Decker, P. Otto, and M. L. Gore. 2007. Working through black bear management issues: A practitioners' guide. Northeast Wildlife Damage Management Research and Outreach Cooperative. Ithaca, New York.

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